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CG-ENG
Policy Letter 04-25
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COMDT (CG-ENG)

To: Distribution

Subj: FOAM FIRE EXTINGUISHING SYSTEMS AND PORTABLE FOAM
EXTINGUISHERS – GUIDANCE ON SOLAS REGULATION PROHIBITING PFOS

Ref: (a) SOLAS regulations II-2/1.2.10 and 10.11, adopted by Resolution MSC.532(107)
(b) MSC.1/Circ.1694, Unified Interpretations of SOLAS Chapter II-2,
and the 1994 and 2000 High Speed Craft (HSC) Codes
(c) 46 U.S.C. § 3103; 46 U.S.C. § 3316; 46 C.F.R. Part 8, Vessel Inspection
Alternatives

1. PURPOSE. This policy letter provides guidance on how the Coast Guard or Recognized Organization (RO) will verify compliance with the Safety of Life at Sea (SOLAS) regulations for fire extinguishing media containing perfluorooctane sulfonic acid (PFOS) entering into force on January 1, 2026. This guidance is also intended to alleviate concerns on this subject for U.S. ships that are subject to foreign port state control examinations.

2. BACKGROUND

- a. On June 8, 2023, the International Maritime Organization (IMO) Maritime Safety Committee (MSC) published reference (a) to adopt SOLAS regulation II-2/10.11 prohibiting the use or storage of fire extinguishing media containing PFOS for new ships constructed on or after January 1, 2026. Reference (a) also adopts SOLAS Regulation II-2/1.2.10, requiring existing ships to comply with this requirement no later than the date of first Safety Equipment Survey on or after January 1, 2026.
- b. On July 4, 2025, MSC published reference (b) providing necessary clarity for new and existing ships to comply with the requirements prohibiting PFOS.
- c. Firefighting foams containing PFOS have not been commercially produced in the United States since around 2002. While firefighting foams produced after that time are unlikely to contain PFOS or chemicals that degrade into PFOS, many contain chemicals of the larger perfluoroalkyl and polyfluoroalkyl substances (PFAS) group. The decades long movement away from fluorinated substances has led to the development of fluorine-free firefighting foam alternatives that do not contain any PFOS or PFAS substances, however, at this point there are no national or international regulations prohibiting PFAS in firefighting foams.
- d. ROs are classification societies authorized to act on behalf of an Administration. In the United States, ROs may be authorized to carry out certifications and perform certain other

Subj: FOAM FIRE EXTINGUISHING SYSTEMS AND PORTABLE FOAM
EXTINGUISHERS – GUIDANCE ON SOLAS REGULATION PROHIBITING PFOS

services in accordance with reference (c) such as conducting vessel surveys and issuing statements that a vessel meets certain requirements.

- e. SOLAS amendments to mandatory provisions do not automatically change existing Coast Guard regulations and may vary from requirements imposed by those regulations. Fire extinguishing systems that do not meet the requirements described in reference (a) may still be used for all non-SOLAS applications, provided they are able to meet all Coast Guard regulations. However, vessels engaged in international voyages that are not in compliance with reference (a) risk being detained or denied entry by foreign port state control authorities.
- f. The purpose of this policy letter is to provide guidance on how the Coast Guard and ROs may verify that a vessel is compliant with reference (a) requirements set forth by SOLAS.

3. DISCUSSION

- a. Reference (b) clarifies some of the questions Administrations, ROs, and industry representatives have raised based on reference (a). These clarifications include:
 - i. The phrase "fire-extinguishing media" includes firefighting foams.
 - ii. The phrase "containing PFOS" means present in concentrations above 10 mg/kg (0.001% by weight).
 - iii. That "extinguishing media containing PFOS" are not used or stored on ships should require the Administration or its RO to review the maker's declaration or laboratory test reports for the extinguishing media covered by the SOLAS Convention, which should be provided to the Administration or to its RO by shipyards, repair yards, and equipment makers.
- b. Aboard U.S. ships, foam concentrates manufactured since the early 2000s are expected to meet the new PFOS regulations in reference (a). However, as foam concentrates can have a long shelf life, it is possible that some U.S. vessels have older foam concentrates still in service that do not meet reference (a) regulations.
- c. Portable foam extinguishers contain a pre-mixed solution of foam concentrate and water as well as a propellant. It is not expected that foam portable extinguishers containing PFOS remain in-service on board U.S. vessels. However, foam extinguishers fall under these updated SOLAS regulations. Verification of compliance for foam portable extinguishers is required under SOLAS, where applicable.
- d. Based on current information, foam is presently the only documented fire extinguishing media where PFOS has been used in the U.S., therefore other fire extinguishing media does not need to be tested or verified for reference (a) compliance.

Subj: FOAM FIRE EXTINGUISHING SYSTEMS AND PORTABLE FOAM
EXTINGUISHERS – GUIDANCE ON SOLAS REGULATION PROHIBITING PFOS

4. ACTION.

- a. Owners/operators of vessels subject to SOLAS with firefighting foam or portable foam extinguishers on board their vessel may use the guidance in Enclosure (1) to demonstrate compliance with reference (a). If demonstrating compliance via an alternate method is desired, contact CG-ENG at typeapproval@uscg.mil as soon as possible with the proposed method.
- b. Owners/operators that are unable to comply with reference (a) because the fire extinguishing system uses firefighting foam containing PFOS above the 10 mg/kg (0.001% by weight) limit should procure compliant replacements or contact the manufacturer of the currently installed fire extinguishing systems as soon as possible regarding options for system compliance. Due to potential differences in viscosity, mixing ratios, and other factors, any replacement of foam concentrate must be verified against the system's approved Design, Installation, Operation, and Maintenance manual to ensure compatibility. After contacting the system manufacturer, vessel owners/operators should direct any technical questions to CG-ENG if changes to installations are required.
- c. Vessel owners/operators should retain copies of documents detailed in Enclosure (1) on board to demonstrate compliance with reference (a).

5. DISCLAIMER. This policy letter provides guidance and is not a substitute for applicable legal requirements. It is not intended to, nor does it impose legally binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators in applying statutory and regulatory requirements.

6. CHANGES. This policy letter will be posted on the web at [CG-ENG Policy \(uscg.mil\)](https://www.dco.uscg.mil/CG-ENG/Policy) (<https://www.dco.uscg.mil/CG-ENG/Policy>). Changes to this policy will be issued as necessary. Any questions concerning this policy should be directed to Commandant (CG-ENG), Commercial Regulations and Standards Directorate, Office of Design and Engineering Standards at CGENG@uscg.mil.

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Enclosure: (1) Procedures for demonstrating PFOS concentration compliance

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EXTINGUISHERS – GUIDANCE ON SOLAS REGULATION PROHIBITING PFOS

Enclosure (1): Procedures for demonstrating PFOS concentration compliance

Procedures for Demonstrating PFOS Concentration Compliance

The following provides guidance for vessel owners/operators of U.S. vessels subject to SOLAS with fixed extinguishing systems (FES) using foam concentrates, portable foam extinguishers, or portable foam applicators on board to demonstrate compliance with reference (a).

- a. Vessel owners/operators should provide one of the following documents below:
 - i. Foam maker's declaration.
 - ii. Foam maker's laboratory test reports.
 - iii. Laboratory test results from samples taken from the concentrate storage tanks and containers on board the vessel.
- b. The declaration issued by the foam maker should contain the following information:
 - i. Foam type or name.
 - ii. Production period.
 - iii. Batch number (if applicable).
 - iv. Confirmation that the level of PFOS is at or below 10 mg/kg (0.001% by weight).
- c. The declaration issued by the foam maker may contain reference to the USCG Certificate of Approval (COA) or foreign approvals if equivalency was issued. If the declaration does not, then the foam type on the declaration should be verified to match the foam type listed on the COA. A COA that states compliance with reference (a) may be accepted in lieu of the documentation under paragraph (a).
- d. The foam maker's laboratory test reports should specify the recognized standard used to test the sample, in addition to the information listed in paragraph (b).
- e. Where the foam maker's declaration or foam maker's laboratory test reports are not available, sampling and testing of the foam concentrate on board should be conducted.
- f. Sampling of foam concentrate(s) on board should be completed in accordance with the foam maker's supplied instructions. If instructions do not exist, then the foam should be sampled as follows to reduce the chances of foam concentrate degradation, stratification, or sediment build-up:
 - i. Samples taken from the foam FES storage tank(s) should be representative of the foam concentrates stored so that an accurate evaluation can be made.

Subj: FOAM FIRE EXTINGUISHING SYSTEMS AND PORTABLE FOAM
EXTINGUISHERS – GUIDANCE ON SOLAS REGULATION PROHIBITING PFOS

- ii. To ensure a uniform sample, if the foam FES system design permits, circulate the system back to the storage tank(s) for approximately 5 minutes prior to sampling.
 - iii. If circulation is not possible for any reason, take samples from the top, middle, and bottom of the applicable storage tank(s). If it is not possible to take three samples due to the configuration of the storage tank(s) or other reason, then take one sample from the top of the tank and a second sample from the bottom.
 - iv. When sampling foam concentrate from foam FES atmospheric tanks employing foam seal oil, ensure that the foam sample is not contaminated with oil and is representative of the foam concentrate in the tank.
 - v. When using drain-off points, ensure that sufficient fluid is allowed to flush through the pipework to clear any accumulation of sludge and provide a representative sample.
 - vi. Package and label the sample in accordance with instructions from selected test laboratory. This may involve combining multiple samples together to form a singular sample representative of entirety of storage tank.
- g. Testing of the foam concentrates for PFOS should be completed in accordance with a recognized standard that is listed on the laboratory test results. One example of an acceptable standard is utilizing Liquid Chromatography–Mass Spectrometry/Mass Spectrometry (LC/MS/MS) following the procedures in the Department of Defense Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 dated 2017, Table B-15. A list of laboratories accredited to this standard can be found here, under the PFAS by LCMSMS category: [Accredited Labs Search – Environmental Data Quality Workgroup](#).
- h. The foam concentrate type, production period, and batch number on the foam maker’s declaration or laboratory test results should be verified to match any foam extinguishing media on board the vessel to include FES storage tanks, portable containers, or extinguishers.
- i. When the above guidance is met, ROs should issue a statement of fact that the documentation has been reviewed and the vessel complies with reference (a), articulating that the review was completed in accordance with this policy letter. This statement of fact should include a list of, or reference a list of, the foam extinguishing media verified on board the vessel in paragraph (h), to include the necessary system identifiers, capacities, and serial numbers. The USCG may also issue a letter with the same details to a vessel or class of vessels if not subject to inspection by a RO. For questions on the procedures or to propose alternate procedures, reach out to ENG-4 at typeapproval@uscg.mil.